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ON THE FUNCTIONAL ROLE OF THE VERBALIZATION IN CORRESPONDENCE TRAINING PROCEDURES

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We investigated the functional role of the child's and experimenter's verbalizations in correspondence training procedures with toy play behaviors in a day-care center setting. Six children participated in a multiple baseline across responses and/or multielement design. Baseline conditions were followed by reinforcement of verbalization. This resulted in little or no change in responding, similar to findings of previous research. Experiment I isolated the child's verbalization as the variable under study. With an experimenter's prompt and postplay reinforcement held constant, the effects of including versus omitting the child's verbalization were examined. A contingency-space analysis revealed that the presence or absence of the child's verbalization exerted no influence on play with the target toy. In Experiment II, a condition in which no experimenter's prompt occurred was added. Results suggested that the complete absence of any antecedent verbalization, by child or experimenter, resulted in much lower rates of play with the target toys. Again, however, when the experimenter's prompt was included, no clear difference was noted between conditions in which the child verbalized and conditions in which the child did not. These results raise doubts about the commonly held view of correspondence training procedures as a method of promoting self-regulation.

DESCRIPTORS: correspondence training, verbalization, preschool children

In correspondence training, children are usually taught to make a verbal statement, or promise, about their own future behavior, often in the form of, "I'm going to do X." Correspondence between this statement and the child's subsequent behavior then is reinforced. These procedures have been found effective in promoting a wide variety of desirable behaviors in young children, including toy play (Baer, Williams, Osnes, & Stokes, 1984, 1985), in-seat, on-task, good posture (Whitman, Scibak, Butler, Richter, & Johnson, 1982), putting away clothes (Baer, Osnes, & Stokes, 1983), choosing nutritious snack foods (Baer, Blount, Detrich, & Stokes, 1987), hand raising, social initiations (Guevremont, Osnes, & Stokes, 1986a, 1986b; Osnes, Guevremont, & Stokes, 1986), sharing, praising (Rogers-Warren & Baer, 1976), conversation skills (Jewett & Clark, 1979), clean-up tasks (Williams & Stokes, 1982), and completion of academic tasks (Guevremont et al., 1986a). The variety of behaviors to which correspondence training procedures have been successfully applied attests to their practical utility.

Implicit in most correspondence training studies is the assumption that correspondence can be viewed as a generalized response class. That is, correspondence is viewed as a set of topographically distinct responses (usually labeled "doing") that share a common controlling stimulus ("saying") (Stokes, Osnes, & Guevremont, 1987). The fact that a particular subject does X when he previously said that he would, but not when he previously said that he would do something else, or when he previously said nothing, is taken as evidence that the

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response being reinforced is "correspondence," rather than simply "doing X." That is, correspondence is viewed as a response class, with the child's verbalization as the common controlling stimulus.

This conceptualization of correspondence training procedures may be inaccurate, because there are other variables that must be considered. For example, an experimenter's prompt (e.g., "What are you going to do today?") always precedes the child's verbalization. In addition, reinforcement usually follows the emission of the promised behavior. Thus, there are several variables, any one or combination of which the target behavior (doing X) may be a function: the experimenter's prompt, the child's verbalization, and the subsequent reinforcement (Rogers-Warren & Baer, 1976). One possibility is that doing X is controlled by the experimenter's prompt, or by the subsequent reinforcement, or both, with the child's verbalization being functionally unnecessary.

In a recent study by Deacon and Konarski (1987), one group of mentally retarded adults received correspondence training as it is typically used. Another group received reinforcement for engaging in the target behavior, but made no prior verbalizations (promises). Both groups showed increases in the target behaviors over baseline levels, and both groups apparently developed generalized correspondence. Deacon and Konarski suggested that these results can be best understood in terms of rule-governed behavior. The experimenter's verbal prompts, verbal feedback, and provision of reinforcement provided sufficient information for the subjects' development of a rule, such as, "To get the reinforcer, I have to do what I say (or what the experimenter says)." If this interpretation is correct, it implies that the verbalization by the subject is functionally unnecessary to the performance of the target behavior, because the rule can be generated and followed in the absence of verbalizations by the subject.

Mattthews, Shimoff, and Catania (1987) pointed out that a demonstration of correspondence as a generalized response class controlled by the subject's verbalization requires that the verbalization be functionally related to the occurrence of the target behavior. One way to show this relationship is to demonstrate that the subject's probability of doing X after saying X is greater than the subject's probability of doing X after not saying X. If this cannot be demonstrated, then it must be concluded that the subject's saying X and doing X are independent, and that correspondence behavior is not a generalized class of responses controlled by the subject's verbalizations, but instead represents two independent procedures: reinforcement of doing X and prompting of saying X. In other words, if the target behavior (doing X) is controlled by something other than the child's verbalization, then the verbalization is "reduced to an unnecessary component in the say/do sequence" (Stokes et al., 1987, p. 163). Furthermore, to avoid confounding the controlling effects of the child's verbalization with those of subsequent reinforcement, reinforcement must be held constant as the probability of doing-X-after-saying-X and the probability of doing-X-after-not-saying-X are compared.

We systematically replicated previous work in correspondence training and incorporated additional experimental conditions to examine the functional contribution of the child's verbalization and the experimenter's prompt to the occurrence of the target behavior. The study adds to the contribution of Deacon and Konarski (1987) a more detailed analysis of antecedent cues, with a single subject design used in a naturalistic setting.

EXPERIMENT I

Method

Children and Setting

Three children (Jill, Ann, and Carl) enrolled in a preschool and day-care center were selected based on parental consent for participation. All were developmentally normal 4-year-olds with no major behavior problems. All attended the day-care center 5 days per week, 6 to 8 hr per day.

Sessions were conducted during a free-play period between 3:00 and 4:00 p.m. daily in the

children's classroom. Play behaviors with toys used infrequently prior to baseline were chosen as targets. All target toys and numerous other play materials were present in the classroom at all times. One or two teachers, 10 to 12 children, and one or two observers were present in the classroom during sessions.

Definition of Target Behaviors

Doll play was defined as holding, looking directly at, or talking to a doll (or dolls); bristle-block play as holding or touching a bristle block and looking at the same block or another block; kitchen play as looking at the kitchen set while within 1 m of it, or touching and looking at the dishes (which could be taken to other parts of the room); book play as looking directly at a book; and crayon play as touching crayon to paper, or selecting a new crayon from the container.

Measurement of Target Behaviors

All target behaviors were observed each day during a 15-min free-play period. The observation period was divided into 10-s intervals. Observers, listening to an audiotape which cued each interval, noted whether any child performed any target behavior during each 10-s interval. The dependent measure was expressed as the percentage of intervals in which each behavior occurred.

Interobserver Agreement

A second observer independently recorded data during 32% of the sessions, distributed evenly across experimental conditions. Agreement was calculated separately for occurrences and nonoccurrences. An agreement was counted if both observers recorded that a particular child had (or hadn't) engaged in a particular response during a given 10-s interval. The percentage of agreement was then calculated by dividing the number of agreements by the total number of agreements and disagreements. Percentages of agreement for occurrences of bristle-block play averaged 97%; for doll play, 94%; for crayon play, 85%; for book play, 89%; and for kitchen play, 91%. Percentages of agreement for nonoccurrences of bristle-block play averaged 98%; for doll play, 91%; for crayon play, 92%; for book play, 89%; and for kitchen play, 90%.

General Procedures

Preobservation. Every day, an experimenter (the first or third author) brought each child individually to a small, empty room near the classroom. The experimenter either told the child what he or she should do during the upcoming play time or asked the child what he or she intended to do during the play time. Consequences for the child's reply, if one occurred, varied across experimental conditions and are described below. The child was then returned to the classroom.

Observation. After preobservation procedures were completed, the 15-min observation period began. All observers and teachers were blind to the experimental conditions. The observers never interacted with the children. Teachers interacted with the children when the children initiated conversation, or to prevent accidents or aggression, but did not direct activity during the observation period. The experimenter was never present in the classroom during the observation.

Postobservation. Depending on the experimental condition in effect, consequences for various target behaviors were provided immediately after the observation period. Initially, the consequence intended to function as a reinforcer was a grab bag or "happy sack" (Sulzer-Azaroff & Mayer, 1977) containing slips of paper with various social consequences written on them (e.g., hugs, swings, tickles, and tosses in the air). During the experiment, the grab bag appeared to lose its reinforcing function with each child, because the target behavior declined to low levels. From this point on, stickers were provided instead.

Experimental Conditions

Baseline. During the preobservation period, the experimenter first allowed each child to select a reward. This procedure permitted the children to sample the consequences that later would be made contingent on behavior. Next, the experimenter

asked each child, "What are you going to do during play time today?" The children always responded to this question. Regardless of the child's response, the experimenter said "OK" and returned the child to the classroom for observation. No postobservation procedures were conducted during baseline.

Reinforcement of verbalization. Children first were asked what they were going to do during play time. On the first 2 or 3 days, they were then told that if they stated that they would engage in the behavior selected by the experimenters as the current target for intervention, they could pick out a treat. After 2 or 3 days, this prompt was omitted, because each child responded with the correct verbalization without a prompt. After the child stated that he or she would play with the experimenter-selected target toy, a positive consequence was immediately delivered. If a child had refused to make the verbalization, reinforcement would have been withheld, but this never occurred. The child was then returned to the classroom for observation. No postobservation procedures were conducted during these conditions.

Reinforcement of doing (experimenter verbalization). During the preobservation period, the child was briefly told what toy to play with in order to earn reinforcement (e.g., "Today you need to play with the _____ if you want to get a treat"). The child was then returned to the classroom for observation. After the observation period, the experimenter quickly examined the observer's data sheet to determine whether each subject had played with his or her target toy. Each child was then taken individually to the nearby room and told either "You played with the _____ today! That means you can have a treat/sticker. Good job!" or "You didn't play with the _____ today. That means you can't have a treat/sticker. Try again tomorrow."

Reinforcement of correspondence. During the preobservation period, each child was asked what he or she would do during play time. If necessary, a prompt was provided to ensure that the correct verbalization was made (e.g., "Do you remember what you're supposed to say?"). Prompts were rarely necessary. The child was then returned to the classroom for observation. Following observation, the experimenter first checked the observer's data sheet, and then took each child aside for consequences. The experimenter said either "You said you would play with the _____, and you did! That's great! You can have a treat/sticker" or "You said you would play with the _____ today, but you didn't. That means you can't have a treat/sticker today. Try again tomorrow."

To avoid reinforcing momentary touching of the target toys, criterion for the reinforcement of doing or correspondence was set at a minimum total of six intervals, or 7% of intervals. If the child had played with the target toy, but for fewer than six intervals, the child was told that he or she had not played with the toy for a long enough time to receive a treat.

Baseline II. No verbalization was prompted and no consequences were delivered, because these procedures were currently being applied to another target response.

Design

Each child was studied in a multiple baseline across toy play behaviors. After collection of baseline data, reinforcement of verbalization was implemented with the first target toy. When little or no change in responding was observed, reinforcement of doing (experimenter verbalization) was implemented, followed by reinforcement of correspondence. Next, a return to reinforcement of doing was implemented to examine whether its effects would differ after a history of correspondence training had been provided. With the second and third target behaviors, a final return to reinforcement of verbalization was implemented to examine whether any verbal control had been developed. This sequence of conditions was repeated with each target behavior.

Results

Results for Ann, Carl, and Jill are shown in Figures 1, 2, and 3, respectively. Verbalization data are not shown because the correct verbalization occurred on every day that a verbalization was required. All subjects showed low rates of play with

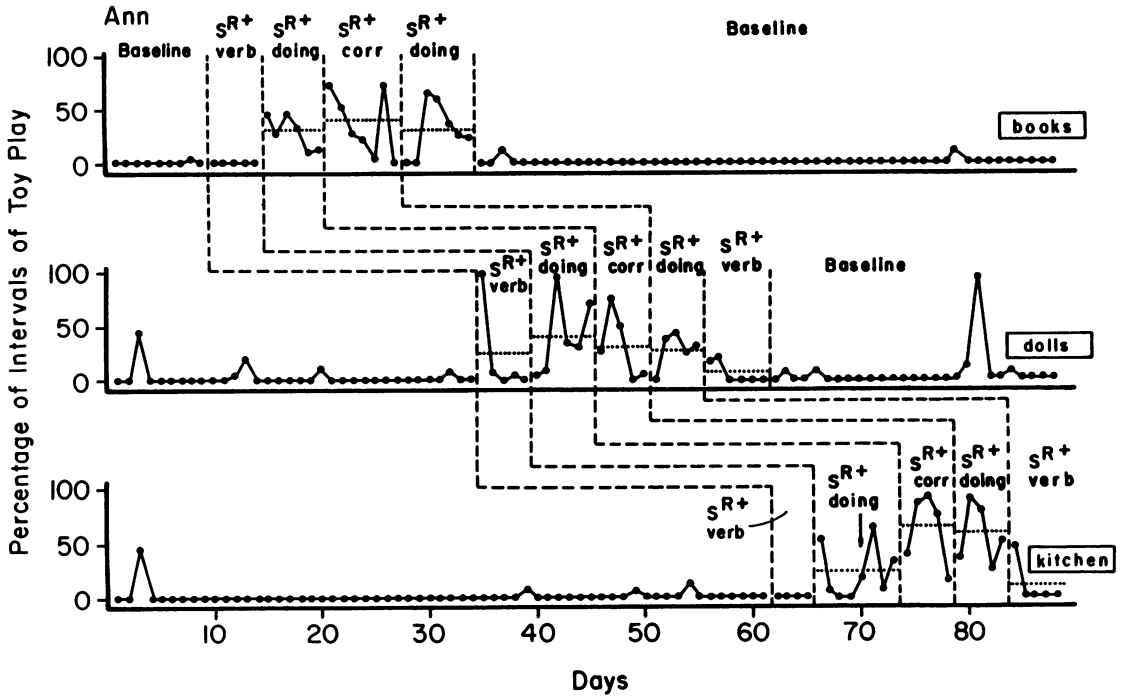

Figure 1. Percentage of intervals of toy play for Ann during baseline, reinforcement of verbalization (S^{R+} Verb), reinforcement of doing, experimenter verbalization (S^{R+} Doing), and reinforcement of correspondence (S^{R+} Corr). Dashed horizontal lines indicate condition means. Arrow indicates day on which stickers were substituted for grab bag.

the target toys during baseline. Reinforcement of verbalization conditions usually resulted in little or no change over baseline levels. Both reinforcement of doing (experimenter verbalization) and reinforcement of correspondence conditions resulted in clear, though variable, increases in levels of responding. Responding was above the criterion of 7% of intervals on most days of these conditions. No consistent difference was observed between reinforcement of doing (experimenter verbalization) and reinforcement of correspondence in the degree of control of the target behaviors.

Contingency-Space Analysis

To examine further whether the saying and doing observed were independent or whether correspondence could be viewed as a response class controlled by the child's verbalization, the probabilities of doing given saying and of doing given not saying were calculated and compared (Matthews et al., 1987). In order to avoid confounding the effects of postplay reinforcement with the effects of saying, only days on which reinforcement was available after play were included (reinforcement of doing and reinforcement of correspondence conditions). These data (Table 1) suggest that, when reinforcement was available after play, the probability that the children would engage in the target behavior was approximately equal, regardless of whether they had previously stated that they would do so. In other words, making a verbal promise to engage in the target behavior had no apparent effect on the probability that the children would do so, on days in which reinforcement was provided after play.

Discussion

These results raise questions about the functional role of the verbalization in correspondence training procedures. No consistent differences between reinforcement of doing (experimenter verbalization) and reinforcement of correspondence in the children's performance of the target behaviors were observed. The contingency-space analysis suggested

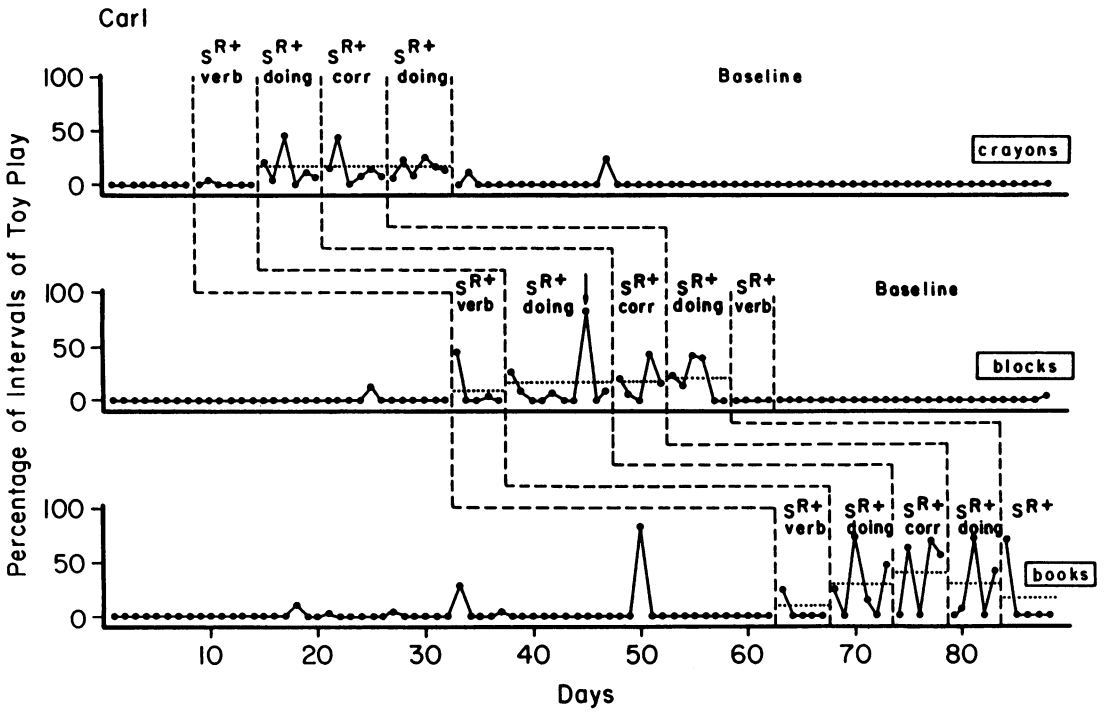

Figure 2. Percentage of intervals of toy play for Carl during baseline, reinforcement of verbalization (S^{R+} Verb), reinforcement of doing, experimenter verbalization (S^{R+} Doing), and reinforcement of correspondence (S^{R+} Corr). Dashed horizontal lines indicate condition means. Arrow indicates day on which stickers were substituted for grab bag.

that, when reinforcement follows doing *X*, then saying *X* and doing *X* may be independent. Thus, when typical correspondence training procedures are used, the correspondence that is observed may not represent a response class, with topographically dissimilar behaviors all controlled by the child's verbalization. It may be that a prompt by the experimenter and subsequent reinforcement for doing *X* are the functional variables controlling responding, and that the child's verbalization is unnecessary. As Deacon and Konarski (1987) suggested, it may be that the experimenter's prompts and feedback, in addition to reinforcement, result in the children learning a rule, such as, "I have to do what the experimenter says, or what I've been taught to say when asked, to get my treat."

Experiment I did not include a condition in which no experimenter's prompt occurred, but reinforcement for engaging in the target behavior was available after play. Such a condition is important because it sheds light on the necessity of *any* antecedent verbalization, by child or experimenter, in controlling the target behavior. In addition, Experiment I suffered from a lack of control of order effects, because reinforcement of doing was always conducted for 5 to 8 days before reinforcement of correspondence was implemented. Experiment II was conducted to address these issues. A condition that included reinforcement for engaging in the target behavior, but no antecedent verbalization by either child or experimenter, was used. In addition, a multielement design was used to avoid possible confounds resulting from implementation of one condition for several days before implementation of the next condition.

EXPERIMENT II

Method

Children and Setting

Three children (Alex, Wes, and Sam) enrolled in a separate classroom at the same day-care center participated in Experiment II. All were developmentally normal 4-year-olds with no major behav-

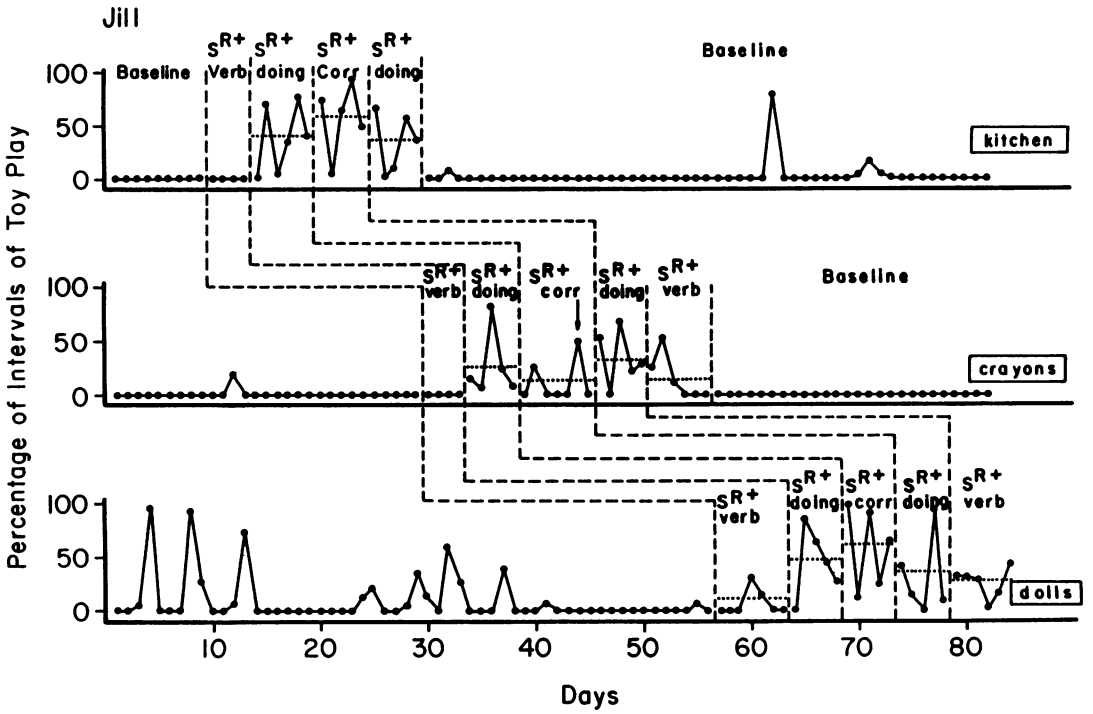

Figure 3. Percentage of intervals of toy play for Jill during baseline, reinforcement of verbalization (S^{R+} Verb), reinforcement of doing, experimenter verbalization (S^{R+} Doing), and reinforcement of correspondence (S^{R+} Corr). Dashed horizontal lines indicate condition means. Arrow indicates day on which stickers were substituted for grab bag.

ior problems. Aside from a slightly different selection of toys and materials available, this classroom was very similar to the classroom described in Experiment I.

Definition and Measurement of Target Behaviors

Blocks, crayons, books, and puzzles were employed as target toys. Definitions for crayon, book, and block play were as described in Experiment I. Puzzle play was defined as holding or touching a puzzle piece while looking at the puzzle. Observation and recording procedures were the same as in Experiment I.

Interobserver Agreement

A second observer independently recorded data during 32% of the sessions, distributed evenly across experimental conditions. Percentages of agreement for occurrences of block play averaged 88%; for book play, 86%; for crayon play, 84%; and for puzzle play, 94%. Percentages of agreement for nonoccurrences of block play averaged 98%; for book play, 92%; for crayon play, 95%; and for puzzle play, 92%.

Table 1
Probability of Doing X for Each Experimental Condition

Subject	Experiment I p (do/say)	p (do/not say)
Ann	.88	.86
Carl	.75	.69
Jill	.71	.84
Overall	.78	.79

Subject	Experiment II p (do/child say)	p (do/experimenter say)	p (do/not say)
Alex	.67	.86	.27
Wes	.82	.77	.18
Sam	.46	.79	.21
Overall	.64	.80	.22

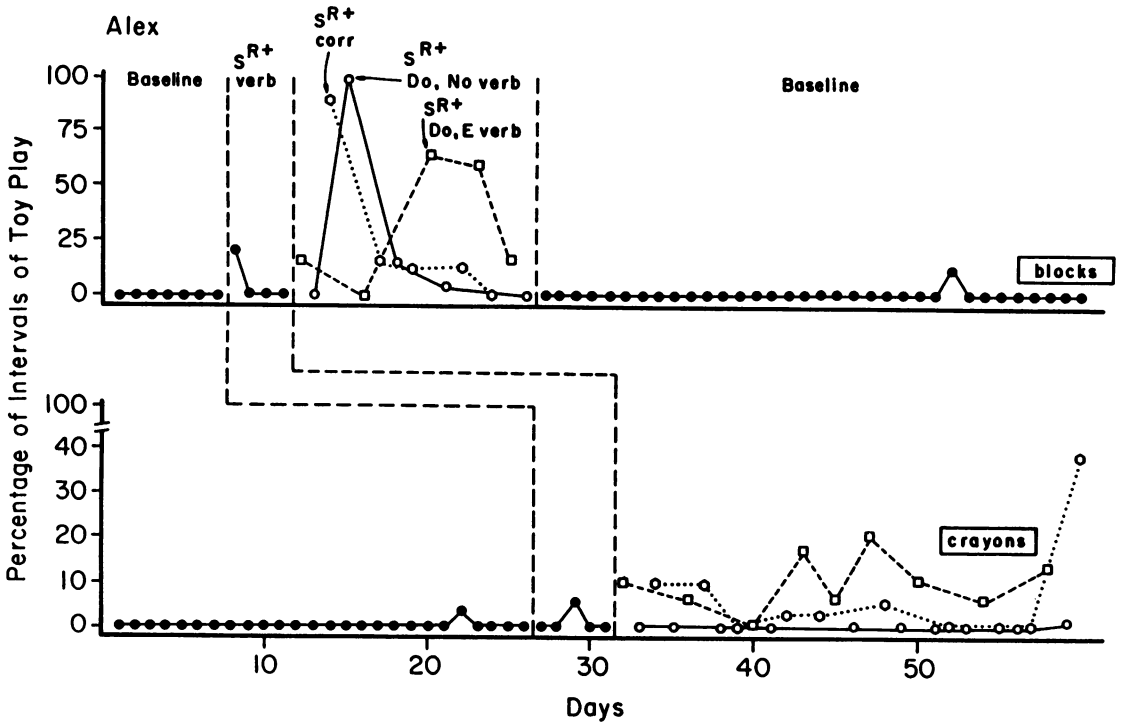

Figure 4. Percentage of intervals of toy play for Alex during baseline, reinforcement of verbalization (S^{R+} Verb), reinforcement of doing, no antecedent verbalization (S^{R+} Do, No Verb), reinforcement of doing, experimenter verbalization (S^{R+} Do, E Verb), and reinforcement of correspondence (S^{R+} Corr).

Procedures and Experimental Conditions

These were as described in Experiment I. A "treasure box" containing inexpensive trinkets such as balloons and small plastic cars and animals was used as the reinforcing consequence. One additional experimental condition was included:

Reinforcement of doing (no antecedent verbalization). No preobservation procedures occurred during this condition. The experimenter did not interact with the child in any way prior to the observation. After the observation, the experimenter first checked the observer's data sheet and then took each child for consequences, saying either "You played with the _____, so you can pick a treat today!" or "You didn't play with the _____, so I can't let you pick a treat today. Try again tomorrow."

Design

A combined multielement and multiple baseline across responses design was used. After collection of baseline data, reinforcement of verbalization was implemented to examine whether correspondence was already in the repertoire. When little or no change in responding was observed, multielement procedures were begun. Reinforcement of doing (no antecedent verbalization), reinforcement of doing (experimenter verbalization) and reinforcement of correspondence were alternated. A random order of presentation of these three conditions was developed, with the restrictions that each condition would occur once before any condition occurred again, and no condition would occur twice consecutively. The same random order was used for each child. This entire procedure was then repeated with a second target behavior.

Results

Results for Alex, Wes, and Sam are presented in Figures 4, 5, and 6, respectively. Verbalizations are not shown because the correct verbalization occurred on every day that a verbalization was required. All subjects showed low rates of play with the target toys during baseline. Reinforcement of

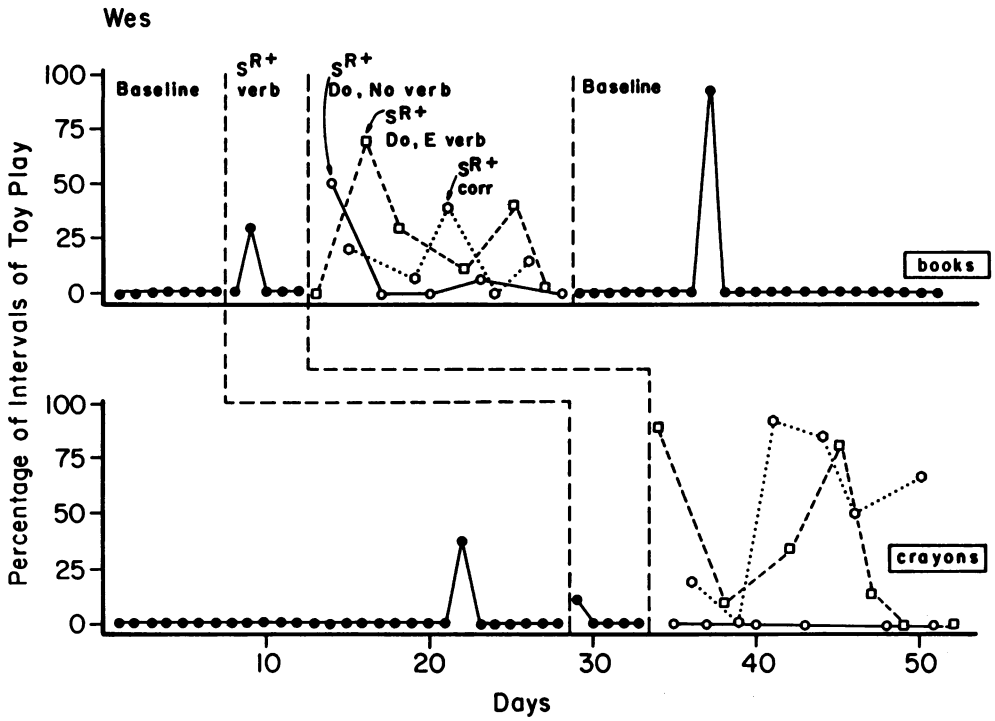

Figure 5. Percentage of intervals of toy play for Wes during baseline, reinforcement of verbalization (S^{R+} Verb), reinforcement of doing, no antecedent verbalization (S^{R+} Do, No Verb), reinforcement of doing, experimenter verbalization (S^{R+} Do, E Verb), and reinforcement of correspondence (S^{R+} Corr).

verbalization usually resulted in little or no change in responding. During the multielement procedures, the results were characterized by great variability. In general, the reinforcement of doing (no antecedent verbalization) condition was less effective than the other two conditions in controlling the target behavior, particularly for the second target behavior for each child (see open circles, Figures 4, 5, and 6). Reinforcement of doing (experimenter verbalization) and reinforcement of correspondence were substantially more effective in controlling the target behavior. For book play with Sam and for crayon play with Alex, reinforcement of doing (experimenter verbalization) was somewhat more effective than reinforcement of correspondence. However, this pattern was not seen uniformly across all responses and children.

Contingency-Space Analysis

The probability of doing given child-saying (reinforcement of correspondence), the probability of doing given experimenter-saying (reinforcement of doing, experimenter verbalization), and the probability of doing given no saying (reinforcement of doing, no antecedent verbalization) were calculated and compared for days on which reinforcement was available after play. These data (Table 1) suggest that, when either the child or the experimenter emitted an antecedent verbalization regarding the target behavior, the probability that the child would engage in that behavior was appreciably higher than when neither the child nor the experimenter emitted an antecedent verbalization. However, when the probability of doing is compared for the child-verbalization conditions and the experimenter-verbalization conditions, no consistent difference is apparent. Although reinforcement of doing (experimenter verbalization) was somewhat more effective overall than reinforcement of correspondence (0.80 vs. 0.64), chi-square analyses revealed that this difference was not significant, but that the difference between 0.64 and 0.22 was significant. In other words, these data suggest that an antecedent verbalization regarding the target behavior is impor-

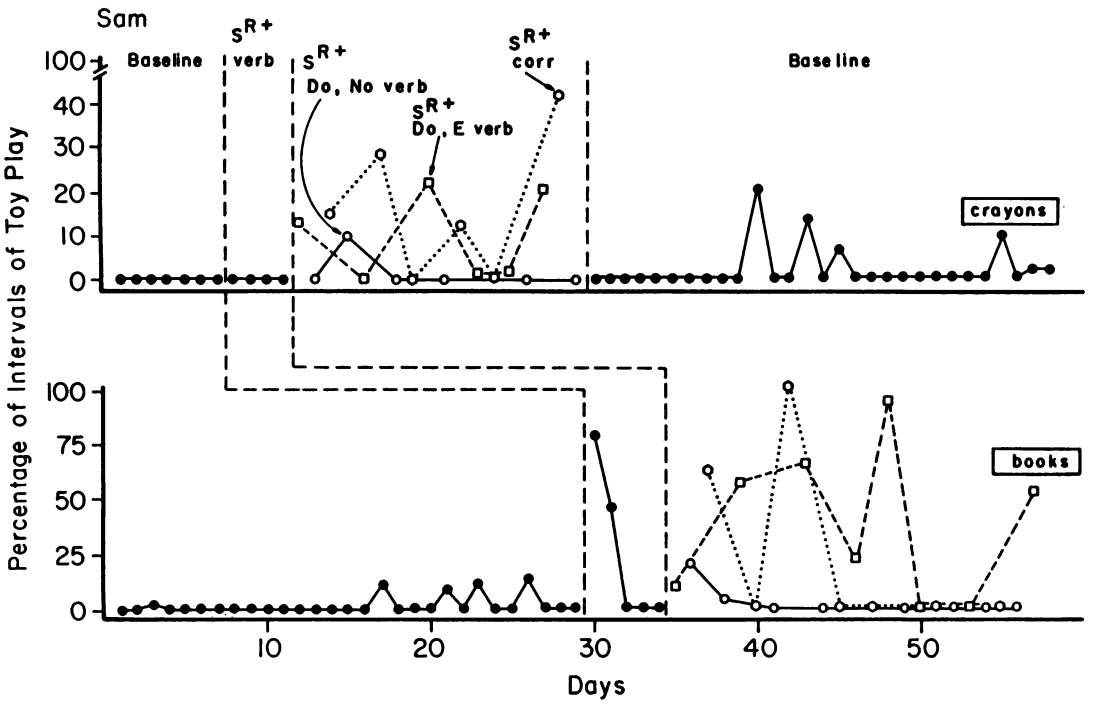

Figure 6. Percentage of intervals of toy play for Sam during baseline, reinforcement of verbalization (S^{R+} Verb), reinforcement of doing, no antecedent verbalization (S^{R+} Do, No Verb), reinforcement of doing, experimenter verbalization (S^{R+} Do, E Verb), and reinforcement of correspondence (S^{R+} Corr).

tant, but that it may not matter whether the child or the experimenter emits this verbalization.

Discussion

The data of Experiment II support those of Experiment I, suggesting that there is no clear difference in control of the target behavior between reinforcement of correspondence and reinforcement of doing (experimenter verbalization). However, these data do suggest that some form of antecedent verbalization may be necessary, because the children were much less likely to engage in the target behavior when no such verbalization occurred. These data also support the conclusion, recently suggested by Deacon and Konarski (1987), that correspondence training can be conceptualized in terms of rule-governed behavior. In this study, the rule might have been, "I have to play with the toy the experimenter says, or the toy I've been taught to say, to get my treat."

Order effects were not completely controlled in Experiment II, because the same random order of conditions was used for each child. However, possible effects of exposure to one condition for a period of several days before exposure to the next condition were eliminated.

GENERAL DISCUSSION

Correspondence training procedures have considerable theoretical importance because of their relationship to the concept of self-regulation (Stokes et al., 1987). Because the procedures involve an antecedent cue in the form of a verbalization emitted by the subject, many authors have described correspondence training procedures as a form of self-regulation or as a method of promoting self-regulation (Guevremont et al., 1986a; Israel, 1978; Kanfer & Karoly, 1972; Karlan & Rusch, 1982). The terms "generalized correspondence," "generalized verbal control," and "verbal regulation" are commonly equated (Baer et al., 1984; Guevremont et al., 1986a; Stokes et al., 1987; Williams & Stokes, 1982), reflecting the view that the goal of

the procedures is to bring the child's behavior under the control of the child's own verbalizations.

Our data do not prove that self-regulation does not occur during correspondence training. However, they also provide no support for the occurrence of self-regulation in correspondence training. One possibility is that two types of regulation do occur, and that they are equally effective. That is, during reinforcement of correspondence, self-regulation may occur, whereas during reinforcement of doing, responding is controlled by the antecedent cues and subsequent reinforcement provided by the experimenter.

It is also possible that an overt verbalization by the child may not be a controlling variable in the typical correspondence training paradigm. Many correspondence training studies share the conceptual flaw described above, in which the possibility that the child's verbalization actually exerts no functional control over the emission of the target behavior is ignored. Some studies of maintenance and generalization of correspondence have found that a reinforcement strategy, such as delayed reinforcement (Baer et al., 1984; Whitman et al., 1982), is needed to maintain control of the target responses. Even when maintenance or generalization of correspondence is documented under conditions in which no reinforcement is provided, it is not clear whether the child's verbalization is the controlling variable. As Stokes et al. (1987) cogently state, "A verbalization and subsequent (non)verbal behavior, for example, may covary systematically but both be occasioned by a third variable (e.g., an experimenter instruction). Here, the relationship is purely correlational and saying would not be a necessary component in the sequence (i.e., in occasioning doing)" (p. 162). Clearly, labeling such a process "verbal control" or "self-regulation" is unwarranted if the target response is actually controlled by an experimenter's prompt, reinforcement, or both. It is also unwarranted if, as Deacon and Konarski (1987) suggest, the behavior could be better conceptualized as an example of rule-governed behavior, in which emission of the verbalization by the subject is unnecessary for the development of the rule.

In this study, reinforcement contingent on the target behavior was provided during most experimental conditions. A systematic investigation of the role of the verbalization in generalization of correspondence to untrained behaviors, although very important, was beyond the scope of this study. Thus, the role of the child's antecedent verbalization under conditions when no postplay reinforcement is available is unclear. Our data suggest that prompting and reinforcing a verbalization, but providing no postplay reinforcement, occasionally results in some limited control of the target behavior (see Jill's data, Days 80 to 85). However, it remains to be demonstrated whether this control is exerted by the child's verbalization per se, or whether the control is actually exerted by the experimenter's prompt, with the child's verbalization being unnecessary.

The development of generalized correspondence, or verbal self-regulation, with responses not specifically trained is an important issue for future research. Whether a history of training in which the child emits verbalizations leads to more widespread or more consistent generalization of control than a history in which the child does not make these verbalizations should be investigated. In addition, our study included no conditions in which child verbalizations occurred but experimenter prompts did not. Although such a condition is likely to be difficult to arrange, it is worth investigating.

Another point that merits investigation in future research is the nature of the child's verbalization. In our study, as in most, the content of the verbalization was determined by the experimenter. Whether different results might be seen if the child determined the content of the verbalization is an unresolved question. In addition, the great variability in responding seen in our study might have been reduced had a higher criterion for reinforcement been used. Future research might include a criterion for reinforcement that, while providing room for some variability, produces consistently greater changes over baseline levels, thereby demonstrating greater experimental control.

In conclusion, the relationship between verbal

control, or self-regulation, and correspondence training procedures needs clarification. Certainly, verbal self-regulation is an important process and should be studied. It is important, however, that "verbal regulation" refer to a process in which the subject's verbalization is, in fact, the variable controlling the response. Future research should continue to explore the conditions under which a subject's verbalizations exert functional control over subsequent behavior.

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